Supporting Information

Targeting Abasic Sites and Single Base Bulges in DNA with Metalloinsertors

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Figure S1. Gel showing photocleavage titration for Rh(bpy)₂(chrysi)³⁺ and AB-G Binding to determine binding affinity. Conditions: 1 μ M DNA in buffer (50 mM NaCl, 10 mM NaPi, pH 7.1) with variable [Rh(bpy)₂(chrysi)³⁺] irradiated for 10 minutes on a solar simulator (325-450 nm). Lane 1: No Rh(bpy)₂(chrysi)³⁺, 10 minute irradiation. Lane 2: 10 μ M Rh(bpy)₂(chrysi)³⁺, no irradiation. Lanes 3-18: 10 minute irradiation with variable rhodium (50 nM, 100 nM, 200 nM, 400 nM, 600 nM, 1 μ M, 2 μ M, 3 μ M, 4 μ M, 5 μ M, 6 μ M, 7 μ M, 8 μ M, 9 μ M, 10 μ M).



Figure S2. Gel for the determination of the length of the fragments resulting from the photocleavage of AB-C and AB-G. Conditions for AB-C and AB-G lanes: 1 μ M DNA in buffer (50 mM NaCl, 10 mM NaPi, pH 7.1) with 1 μ M DNA irradiated for 15 minutes with a solar simulator (325-450 nm). Standardization lanes contain labeled 10-17-length oligonucleotides for comparison to photocleavage band.



Figure S3. MALDI-TOF mass spectrograph of photocleavage products of duplex 5'- GAC CAG CTT ATC ATC CCT AGA TAA GCG -3' in which the red, underlined thymine is the unpaired complement of an abasic site. The rightmost peak corresponds to the full, uncleaved strand. Assigned cleavage products can be viewed on the left-hand side of the plot and correspond to 5'-PO₄-CCT AGA TAA GCG-3', 5'-GAC CAG CCT ATC AT-PO₄-3', and 5'-GAC CAG CCT ATC AT-dehydroC-3'.